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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,302	04/02/2004	Carl K. Sawtell		8583

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EXAMINER

MILLER, PATRICK L

ART UNIT PAPER NUMBER

2837

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/816,302

Applicant(s)

SAWTELL ET AL.

Examiner

Patrick Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 04142005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 04/14/05 have been fully considered but they are not persuasive.

- In response to applicant's arguments, the recitation "a motor positioning servo loop" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).
- In Bibyk, Figure 1 discloses a microcontroller (#34); an actuator that drives physical phenomenon (#52); and a DAC coupled as claimed to the microcontroller and actuator, respectively (#40). The Background of the Invention section also discloses that the physical result or phenomenon drives a motor (col. 1, ll. 54-57). Additionally, Bibyk discloses a sigma-delta converter (oversampling DAC) (col. 2, ll. 9-20, 26-29). The examiner interprets this to mean that the DAC displayed in Figure 1, is a sigma-delta DAC.
- Additionally, Bibyk discloses the sigma-delta converter (the DAC) used in areas such as speech and video systems (col. 2, ll. 23-24). This does not mean that a sigma delta converter can only be used for audio and video signals, but rather, that a sigma delta converter can be used in speech and video systems. Thus, when Bibyk speaks of a physical result or phenomenon being the motion of a motor or

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loudspeaker (col. 1, ll. 55-57), this means that the motor or loudspeaker is simply part of the speech or video system.

- Therefore, Bibyk does anticipate claims 1, 4, and 5 because it discloses each feature. See rejection below. Also note that Bibyk does disclose a feedback loop (Fig. 1, #12).
- With respect to the applicant's arguments for claims 2, 3, and 6, if applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also Zurko, 258 F.3d at 1386, 59 USPQ2d at 1697 ("[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2).
- The examiner has provided documentary evidence for the Official Notice rejections (see rejections below). Accordingly, this action is made final. If the examiner adds a reference in the next Office action after applicant's rebuttal, and the newly added reference is added only as directly corresponding evidence to support the prior common knowledge finding, and it does not result in a new issue or constitute a new ground of rejection, the Office action may be made final. If no amendments are made to the claims, the examiner must not rely on any other teachings in the reference if the rejection is made final. If the newly cited

reference is added for reasons other than to support the prior common knowledge statement and a new ground of rejection is introduced by the examiner that is not necessitated by applicant's amendment of the claims, the rejection may not be made final. See MPEP § 706.07(a).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Bibyk (6,202,198).

- In Bibyk, Figure 1 discloses a microcontroller (#34); an actuator that drives physical phenomenon (#52); and a DAC coupled as claimed to the microcontroller and actuator, respectively (#40). The Background of the Invention section also discloses that the physical result or phenomenon drives a motor (col. 1, ll. 54-57). Additionally, Bibyk discloses a sigma-delta converter (oversampling DAC) (col. 2, ll. 9-20, 26-29). The examiner interprets this to mean that the DAC displayed in Figure 1, is a sigma-delta DAC. Additionally, Bibyk discloses the sigma-delta converter (the DAC) used in areas such as speech and video systems (col. 2, ll. 23-24). This does not mean that a sigma delta converter can only be used for audio and video signals, but rather, that a sigma delta converter can be used in speech and video systems. Thus, when Bibyk speaks of a physical result or phenomenon being the motion of a motor or loudspeaker (col. 1, ll. 55-

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57), this means that the motor or loudspeaker is simply part of the speech or video system. Therefore, Bibyk does anticipate claims 1, 4, and 5 because it discloses each feature. See rejection below. Also note that Bibyk does disclose a feedback loop (Fig. 1, #12).

- With respect to claim 4, the DAC is a sigma-delta digital bitstream DAC (col. 2, ll. 16-20).
- With respect to claim 5, the DAC is implemented in hardware within the microcontroller (col. 2, ll. 9-13; 30-36).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bibyk as applied to claim 1 above, and further in view of Galloway (6,246,536).
  - Bibyk does not disclose the limitations of claims 2 and 3.
  - Galloway discloses a voice coil motor (VCM) that drives an actuator in an optical data storage device (col. 4, ll. 22-49). It would have been obvious to one having ordinary skill in the art at the time of the invention that the motor actuator of Bibyk would be driven by a voice coil motor in an optical data storage device actuator because implementing a sigma-delta DAC into an optical data system, provides the advantage of shifting unwanted signals to higher frequencies so that unwanted signals can be filtered using

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low-pass filtering. Thus, it would have been obvious to shift upward to higher frequencies the unwanted noise in the system so that the signals can be filtered using a low pass filter. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention that the motor actuator of Bibyk would be driven by a VCM in an optical data storage device actuator because of the advantages discussed above, as taught by Galloway.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bibyk as applied to claim 1 above, and further in view of Contreras (6,154,017).

- Bibyk does not disclose the limitations of claim 6.
- Contreras teaches that DACs can be implemented in either hardware or software (col. 5, ll. 18-20). The motivation to implement a DAC in software is so that it may be reprogrammed.
- Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention that the Bibyk's DAC, which is implemented in hardware, could be implemented in software, thereby providing the advantage of allowing the DAC to be reprogrammed, as taught by Contreras.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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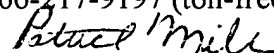
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Miller whose telephone number is 571-272-2070. The examiner can normally be reached on M-F, 8:30-5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 41. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patrick Miller  
Examiner  
Art Unit 2837

pm  
July 21, 2005

  
MARLON FLETCHER  
PRIMARY EXAMINER